

04/29/2009

Appln. No.: 10/563,681
Amendment Dated March 6, 2009
Reply to Office Action of January 8, 2009

BPD-103US

Amendments to the Claims: This listing of claims will replace all prior versions, and listings, of claims in the application

Listing of Claims:

1. (Currently Amended) A device for the simultaneous and qualitative or quantitative determination of a plurality of analytes, wherein at least one of the plurality of analytes is a cellularly bonded analyte, in a liquid sample, the device comprising:

~~at least one membrane~~ a single membrane with an application zone for the application of the liquid sample,

at least one group of at least two indicator zones, which are able to interact with the analytes, and

at least one absorption region which takes up the liquid after having passed the indicator zones;

wherein the indicator zones are located between the application zone and the absorption region ~~wherein the flow directions from the application zone through the respective indicator zones of a group towards an absorption region (flow tracks) are substantially parallel and that at least two different flow tracks are present;~~

wherein ~~the~~ at least two indicator zones are positioned on the membrane substantially parallel and absent a physical separator between indicator zones, the at least two indicator zones comprise at least two types of indicator particles are used of which at least one type being erythrocytes; and

wherein ~~the membrane~~ the at least two indicator zones comprise ~~comprises~~ a first indicator zone containing a bonding element for binding the cellularly bound analyte and ~~the membrane~~ the at least two indicator zones comprise ~~comprises~~ a second indicator zone containing a binding element for binding an element contained in plasma in the liquid sample.

2. (Currently Amended) The device according to claim 1, wherein the indicator zones are so arranged that the test liquids ~~for any one flow track~~ flow through not more than one indicator zone.

3. (Currently Amended) The device according to claim 1, wherein the indicator zones are arranged in a ~~diagonal~~-V-, W-, M-, N-shaped or a linear row.

4. (Withdrawn) The device according to claim 1, wherein at least two rows of indicator zones are arranged in the flow direction, one behind the other and/or laterally staggered, and the indicator zones of each row are arranged in relation to one another with a gap there between so that the test liquid for any one flow track flows through not more than one indicator zone.

5. (Withdrawn) The device according to claim 1, wherein at least two rows of indicator zones are arranged in the flow direction one behind the other and/or side by side and the indicator zones of each row in relation to one another are arranged without a gap there between so that the test liquid for any one flow track passes through more than one indicator zone.

6. (Previously Presented) The device according to claim 1, wherein at least two groups of indicator zones are arranged which are disposed starting from the application zone in different flow directions.

7. (Previously Presented) The device according to claim 1, wherein the indicator zones comprise antibodies or antibody fragments or lectines, antigens or antigen epitopes, cells or cell fragments, or mixtures thereof.

8. (Previously Presented) The device according to claim 1, wherein the indicator zones comprise antibodies or antibody fragments against blood group antigens or antigen epitopes and membranes or cell fragments of blood groups A1, A2, B, O erythrocytes, or mixtures thereof.

9. (Previously Presented) The device according to claim 1, wherein the indicator zones comprise antibodies or antibody fragments against blood group antigens or antigen epitopes and synthetic peptides, recombinant antigens, antibodies or antibody fragments against infective markers, or mixtures thereof.

10. (Previously Presented) The device according to claim 1, wherein the indicator zones comprise antibodies or antibody fragments against blood group antigens or antigen epitopes and fragments of thrombocytes, lymphocytes, or mixtures thereof.

11. (Previously Presented) The device according to claim 1, wherein the membrane consists of polyethylene, nitrocellulose or nylon.

12. (Previously Presented) The device according to claim 1, wherein downstream of the application zone and upstream of the indicator zones at least one sealing element is provided on the membrane.

13. (Previously Presented) The device according to claim 12, wherein downstream of the sealing element and upstream of the indicator zones at least one conjugate pad is applied.

14. (Previously Presented) The device according to claim 1, wherein the components of the device have been applied onto a support layer for mechanical reinforcement.

15. (Previously Presented) The device according to claim 1, wherein the components of the device are integrated in a casing.

16. (Withdrawn) The use of the device according claim 1, for the simultaneous performance of blood group determinations and serum reverse grouping (serum cross-check) and/or antibody detection test.

17. (Withdrawn) The use of the device according to claim 1, for the simultaneous performance of blood group determinations and the detection of infection serological markers or fragments thereof.

18. (Withdrawn) The use of the device according to claim 1, for the simultaneous performance of blood group determinations and the detection of antibodies against blood cells, in particular anti-thrombocyte or anti-lymphocyte antibodies or the respective fragments thereof.

19. (Withdrawn) A process for the determination of a plurality of analytes or their derivatives in a liquid sample, comprising: applying a liquid sample comprising the plurality of analytes or their derivatives onto the application zone of at least one membrane of the device according to claim 1, wherein this sample is present in an adequate amount to induce the liquid sample to flow in the direction of the absorption region through the indicator zones and to induce the analytes or their derivatives in the test liquid to form a complex in the indicator zones.

20. (Withdrawn) The process according to claim 19, wherein the analytes or their derivatives are blood group antigens or antigen epitopes, antibodies directed against blood group antigens or fragments thereof, antibodies or fragments thereof directed against thrombocytes or leukocytes or antibodies or fragments thereof directed against infective agents or antigens of infective agents or antigen epitopes.

21. (Withdrawn) The process according to claim 19, wherein the analytes or their derivatives comprise antigens or antigen epitopes of the blood group systems ABO, Rh and Kell.

22. (Withdrawn) The process according to claim 19, wherein the analytes or their derivatives comprise antibodies or fragments thereof against thrombocytes, lymphocytes, or mixtures thereof.

23. (Withdrawn) The process according to claim 19, wherein the analytes or their derivatives comprise antibodies or fragments thereof against bacterial and/or viral agents or viral or bacterial antigens or antigen epitopes.

24. (Withdrawn) The process according to claim 19, wherein the liquid sample comprises complete blood, blood cell concentrate, serum, plasma, test liquid or a mixture thereof.

25. Canceled